WAC 197-11-960 ENVIRONMENTAL CHECKLIST

ENVIRONMENTAL CHECKLIST

Purpose of checklist:

The State Environmental Policy Act (SEPA), Chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable: Gate 2 Boatyard (former Weldcraft Steel & Marine site)

2. Name of applicant: Port of Bellingham

3. Address and phone number of applicant and contact person:

Applicant:
Port of Bellingham
Mr. Fred Seeger
Director of Facilities
P.O. Box 1670
Bellingham, WA 98227
360-676-2500

Authorized Agent:
Mr. Larry Beard
Landau Associates
130 2nd Ave. S
Edmonds, WA 98020
425-778-0907

4. Date checklist prepared: April 15, 2003

5. Agency requesting checklist: Port of Bellingham

6. Proposed timing or schedule (including phasing, if applicable):

This proposed project consists of remediation of contaminated sediments, construction of marine habitat for restoration and mitigation purposes, beneficial reuse of clean sediment from maintenance dredging for marine habitat construction, and in-water improvements to an existing boatyard. As a result, the project would be constructed during the period from September 1, 2003 to February 15, 2004, which is the in-water construction period designated by Washington Department of Fish and Wildlife (WDFW), National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS) for the protection of marine fisheries. The designated construction period corresponds to that period identified by the resource agencies when Endangered Species Act (ESA) listed fish species are not present at the project site.

Project activities would occur throughout the available period. As indicated below in Table 1, project activities, which consist of in-water dredging, backfill, and structure removal, repair and replacement work, as described in Section A.11 below, are expected to take about 5 months.

TABLE 1: ESTIMATED DURATION OF PROJECT IN-WATER ACTIVITIES

Project Component	Estimated Duration
Bulkhead Replacement	6 to 8 weeks
Dredging	3 to 4 weeks
Backfilling	1 week
Marine Railway Removal	1 to 2 weeks
Pile Removal	1 week
150-ton Travel Lift Installation	8 to 10 weeks
Wharf and Bulkhead Repairs	2 to 4 weeks
Fender Pile Replacement	1 week
Marine Habitat Construction	4 to 8 weeks

The duration and total period of each element of the in-water work (Table 1) would be affected by a number of factors, including:

- Type of equipment and construction procedures used by the contractor
- Sequencing of work elements
- Availability and delivery schedule for construction materials
- Length of daily in-water work periods, which may be affected by minimum vessel draft requirements and ongoing boatyard activities.

Dredging and backfill placement rates, which may be affected by engineering controls, site access limitations, and water quality considerations, would generally occur during daylight hours. However, sediment removal within the marine railway well may occur at night to maximize the amount of contaminated sediment removed "in the dry" during extreme low tides.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

No future activities are anticipated at this time. The sediment cleanup element of the project is proposed as an interim action under the Model Toxics Control Act (MTCA) and will be performed under an agreed order with the Washington State Department of Ecology (Ecology). It is intended that the interim action achieve final cleanup for sediment. However, post-construction sediment quality compliance monitoring will be conducted and additional sediment cleanup may be required if sediment quality standards are not achieved throughout the site.

Also, subsequent cleanup of upland portions of the site may be required, but preliminary upland remedial investigation (RI) results indicate that localized and limited upland contamination (primarily from a former gasoline underground storage tank) does not extend to the vicinity of the proposed project. Any subsequent upland cleanup or site improvements will be addressed as a separate project.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

Environmental information that has been prepared that is directly related to this proposal includes:

- Report, Phase I Environmental Site Assessment, Weldcraft Steel & Marine Site, Bellingham, Washington. Landau Associates; September 20, 1993.
- Report, Phase II Environmental Site Assessment Weldcraft Steel & Marine Site, Bellingham, Washington. Landau Associates; June 25, 1998.
- Anchor Environmental. 2000. Bellingham Bay Comprehensive Strategy, Final Environmental Impact Statement. October. (Note: Weldcraft Steel & Marine site addressed as a priority sediment cleanup site within FEIS)
- Letter Report, Supplemental Sediment Investigation Results, Weldcraft Steel & Marine, Bellingham, Washington. Landau Associates; January 17, 2001.
- Report, Phase III Environmental Site Assessment, Weldcraft Steel & Marine, Bellingham, Washington. Landau Associates; January 31, 2001.
- Draft Work Plan, Remedial Investigation and Feasibility Study, Weldcraft Steel and Marine Facility, Bellingham, Washington. Landau Associates; March 28, 2001.
- Technical Memorandum, Maintenance and Decommissioning Activities Weldcraft Steel & Marine Facility, Bellingham, Washington. Landau Associates; June 23, 2001.
- Draft Work Plan, Upland Remedial Investigation, Weldcraft Steel & Marine Facility, Bellingham, Washington. Landau Associates; April 5, 2002.
- Joint Aquatic Resources Permit Application (JARPA). Landau Associates; December 20, 2002.
- JARPA March 2003 Addendum. Landau Associates; March 14, 2003.
- Biological Evaluation and Essential Fish Habitat Assessment (BE/EFHA). Landau Associates; December 20, 2002.
- BE/EFHA March 2003 Addendum. (*In prep.*) Landau Associates; March __, 2003.
- Interim Action Work Plan, Weldcraft Steel & Marine, Bellingham, Washington. Landau Associates, April 3, 2003. Public Review Draft.

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

There are no other applications pending for approvals and no current proposals that would directly affect the property covered by this proposal. The cleanup of upland portions of the shipyard site and future expansion of the

shipyard are likely to occur in the future, but are not active proposals at this time.

10. List any government approvals or permits that will be needed for your proposal, if known.

The following government approvals or permits would be needed for this proposal:

- MTCA Agreed Order from Ecology
- Clean Water Act (CWA) Section 404 Individual Permit from U.S. Army Corps of Engineers (USACE)
- CWA Section 10 Permit from USACE
- CWA Section 401 Water Quality Certification from Ecology
- Endangered Species Act Biological Approval from NMFS and USFWS
- Hydraulic Project Approval (HPA) from WDFW, and Substantial Development Permit from the City of Bellingham for the elements of the project that are not part of the MTCA interim cleanup action
- Substantive compliance with provisions of Hydraulic Project Approval (HPA) from WDFW, and Shoreline Substantial Development and Critical Areas Ordinance from the City of Bellingham for the MTCA interim cleanup action elements of the project.

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)

This project consists of a Model Toxics Control Act (MTCA) interim action sediment cleanup, construction of new marine habitat, navigation dredging maintenance, and repair/replacement of in-water structures. The proposed project is primarily designed to clean up the in-water portions of a boatyard facility in Squalicum Outer Harbor that has been in operation for over 50 years. The Port recently evicted the prior tenant and entered into a new lease agreement with Seaview Boatyard North, Inc. in April 2002 to operate the boatyard. This change has provided the opportunity to address problems associated with the prior tenant's operations, including upland and in-water contamination, dilapidated structures, and non-compliance with current regulatory requirements.

The project site is shown on Figures 1 (Vicinity Map), 2 (Project Area Site Plan), and 3 (Existing Site Conditions).

All proposed project work, except for a very small area within the upper portion of the marine railway well, would be conducted in or over Ordinary High Water (OWH), which is about 10 ft MLLW in Bellingham Bay. Therefore, all project work would be conducted within 200 ft of OHW or below. This project would include the following five major in-water construction elements:

- **Sediment dredging** to remove contaminated sediment and to restore previously authorized and constructed navigation depths to -12 ft MLLW, which is a minimum vessel draft requirement for access to the boatyard (Figures 4 and 5, dredge cross sections Figures 6 and 7, backfill and post-dredging areas Figures 8 and 9). A total of up to 8,000 cubic yards (cy) will be dredged, of which 7,600 cy are for sediment remediation and 400 cy are to restore navigation depths.

- **Installation of a galvanized steel sheetpile bulkhead to replace (i.e., encapsulate) a timber bulkhead** along the east shoreline (Figures 10 and 11). About 180 ft of the 368 ft length of bulkhead replacement is required to implement the remediation of contaminated sediment. The remainder of the bulkhead replacement is to prevent additional sloughing of upland soil into the marine environment resulting from the poor condition of the existing bulkhead.

- **Installation of two 125-ft long finger piers to support a new 150-ton travel lift** to replace the existing marine railway, and filling of railway well (Figures 10 and 12). Removal of the existing marine railway is required for remediation of contaminated sediment. he new travel lift piers will replace the function of the existing marine railway, but because it is not an in-kind replacement, it is

considered part of site redevelopment rather than sediment cleanup. The travel lift piers will have less environmental impact than the existing marine railway, as described in Section B(3)(a)(2).

- **Backfilling** as required for both contaminated sediment cleanup and site redevelopment purposes. Backfill areas and volumes for sediment cleanup and site redevelopment are described in detail in Section B(3)(a)(2).

- **Construction of new marine habitat** along the Squalicum Outer Harbor breakwater (Figures 15 and 16). New marine habitat would be constructed to provide compensatory mitigation for habitat impacts associated with project dredging and backfilling activities, and to provide significant habitat restoration beyond compensatory mitigation requirements.

Additional maintenance and repair activities would occur over or in water as part of this project (most repair activities would be conducted out of the water, either during low tide or from over-water structures). These activities consist of:

- **Repair of the existing timber bulkhead** along 205 ft of Segment C at the north shoreline (Figures 10, 13a and 13b) to prevent continued sloughing of upland soil into the area to be dredged for sediment remediation purposes.

- **Repair/replacement of damaged timber piles** associated with the existing wharf and timber bulkhead in Segment C (Figures 10, 13a and 13b) and the north travel lift float for site improvement purposes.

- **Repair/replacement of selected structural elements** of the existing wharf along Segment C for site improvement purposes.

The proposed project provides significant environmental benefit beyond the sediment remediation and habitat mitigation/restoration elements described above. The project will remove 215 creosote-treated pilings and about 9,000 ft^2 of creosote-treated timbers from the marine environment that are associated with the marine railway and timber bulkhead. As a result, this project is strongly supported by the Whatcom County Marine Creosote Piling Remediation Program being administered by the City of Bellingham, through a grant from the Washington State Department of Ecology (Contact: Barry Wenger, Ecology, Bellingham Field Office, 360-738-6245). Additionally, the new 150-ton travel lift piers will shade about 330 ft^2 less marine habitat than the existing marine railway, and the shading will be less severe because the height of the travel lift piers over the marine substrate is significantly greater than the existing marine railway.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The location of this proposal is 2652 Harbor Loop Drive, Bellingham, Washington, 98225 (street address). The proposal site is located in Section 25, Township 38 North, Range 2 East in Whatcom County, and includes the waterfront and in-water areas shown on Figures 1, 2, and 3.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site: Relatively flat upland and deep subtidal (greater that –10 ft MLLW) portions of the site with moderately sloping intertidal and shallow subtidal areas.

b. What is the steepest slope on the site (approximate percent slope)?

The upland portion of the site is relatively flat with a surface elevation of between 13 and 15 ft MLLW. The bathymetric surface of the marine portion of the site generally ranges from elevation 5 to -12 ft MLLW, with slopes ranging from generally flat in the deeper subtidal areas to about 6:1 (horizontal:vertical) in the intertidal and shallow subtidal areas. The habitat mitigation/restoration area is gently sloping, ranging from about -9 ft near the breakwater to -12 ft at the outer edge.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

Sediments to be dredged consist primarily of sand, silt, and clays. There are no agricultural soils at the site.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There are no surface indications or history of unstable soils in the immediate vicinity.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

No upland fill or grading would occur as a result of this project. In-water fills would consist of about 3,300 cubic yards (cy) of a sand and gravel mixture with a relatively low percentage of fines that would be imported from upland sources (likely a commercial sand and gravel pit) to backfill the former marine railway well behind the bulkhead and the marine areas dredged below -13 ft MLLW for sediment remediation. About 30,000 cy of Squalicum Waterway dredge materials would be used to construct the new marine habitat site. About 460 cy of imported pea gravel from commercial upland sources would also be used to fill the area between the existing timber-pile and new sheet-pile bulkheads, and between the new bulkhead lagging and existing lagging along Segment C of the bulkhead.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

All earth-moving activities would take place in the water. No long-term in-water erosion is expected to result from in-water dredging, construction, or boatyard use. All in-water dredging and construction at the proposed boatyard project area would be conducted within the breakwater, in an area of limited currents, on flat or gently sloping contours. Clean backfill from upland sources would be placed to restore a relatively flat grade at about -13 ft MLLW. Marine side slopes around the perimeter of the dredged area would be constructed at about 2H to 1V. These slopes were selected to be stable from erosion and slumping.

At the new marine habitat site, stability analyses were conducted to predict erosion during annual and 5-year waves at the most sensitive tidal stage. These analyses showed that the upper bench elevations should be stable between -4 and -6 ft MLLW. Based on these evaluations, Squalicum Waterway dredge materials should be sufficiently strong to resist erosion from ambient waves. Colonization of the habitat surface by eelgrass, which is expected to occur, would provide further protection from erosion over time.

g. About what percent of the site would be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

About 3,600 ft^2 of fill would be placed over/around the marine railway well and between the new sheetpile and former timber bulkhead. The fill around the railway well (approximately 2,700 ft^2) would be covered with asphalt.

This would result in less than 5 percent of the site surface (nearshore water portion only) being covered in impervious surfaces after project completion. All storm water runoff generated from impervious surfaces would be collected, treated and discharged consistent with applicable storm water regulations.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

Proposed measures to reduce or control erosion from in-water activities are described in section B.1.f.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

During construction, exhaust would be generated by construction equipment (such as powered barges, tugs, dredging equipment, and pile-driving equipment) and worker support vehicles. This exhaust would cause minor and short-term degradation to air quality near the proposal site, while construction equipment was in operation. There are many such sources of similar emissions in the surrounding port-industrial area. Emissions from this proposal would add incrementally to the air quality impacts of these other multiple sources. During operation, the proposal may continue to cause minor incremental decreases in air quality due to travel lift operations and perhaps minor increases in impacts from worker support vehicles, to the extent a more active shipyard site might generate minor additional employment and onshore use.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

The proposal is in an active port-industrial area where many mobile emitters (tugs, vessels, trucks, automobiles, locomotives, and other generally mobile sources) operate. Additionally, other fixed emission sources (smaller industrial sources of fugitive and stack emissions) are located on the port-industrial waterfront. These nearby emitters are not expected to impact this proposal.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Construction equipment and worker vehicles would be equipped with standard emission control devices; no other measures are required.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The project is located on and in Bellingham Bay, an urbanized marine body of water forming a portion of the inland marine waters of western Washington.

2) Would the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

All work would be conducted over, in, or adjacent to Ordinary High Water (OWH), which is about 10 ft MLLW in Bellingham Bay; therefore, all project work would be conducted within 200 ft of OHW. As described above (and repeated here to facilitate the assessment of water-related impacts), this project would include the following five

major in-water construction elements:

- Sediment dredging to remove contaminated sediment and to restore previously authorized and constructed navigation depths to -13 ft MLLW (i.e., -12 ft MLLW plus 1 ft overdredge), which is a minimum vessel draft requirement for access to the boatyard (Figures 4 through 9)

- Replacement (i.e., encapsulating) of the timber bulkhead along the east shoreline in Segments A and B with a steel sheet pile bulkhead (Figures 10 and 11)

- Removal of the existing marine railway structure and construction of two finger piers in its place for a new 150-ton travel lift (Figures 10 and 12)

- Backfilling as required

- Construction of new marine habitat along the Squalicum Outer Harbor breakwater (Figures 15 and 16).

Additional maintenance and repair activities would occur over or in water as part of this project (most repair activities would be conducted out of the water, either during low tide or from over-water structures). These activities consist of:

- Repair of the existing timber bulkhead along Segment C at the north shoreline (Figures 10 and 13)

- Repair/replacement of damaged timber piles associated with the existing wharf and timber bulkhead in Segment C and the north travel lift float (Figure 14)

- Repair/replacement of selected structural elements of the existing wharf along Segment C (Figure 13).

The following subsections provide detailed descriptions of these proposed in-water activities.

Sediment Dredging: Up to about 7,600 cy of sediment (primarily sand, silt, and clay) would be dredged from in-water areas to achieve MTCA sediment cleanup goals. Chemicals of concern and their concentrations and distribution have been evaluated in a series of investigations under MTCA. The dredge volume includes an allowance for dredging up to 1 ft of material (overdredge) below the design dredge depth. Contaminated sediment removal areas would include the impacted area west of the new sheet pile bulkhead and the entire marine railway well area east of the new sheet pile bulkhead (Figure 4). The vertical extent of contamination is limited to the upper 4 ft of sediment. The proposed sediment dredging depths (Figure 5) and cross sections (Figures 6 and 7) were developed to remove the upper 4 ft of sediment within the identified zone of contamination, to the extent practicable, given existing site constraints.

To achieve minimum vessel draft requirements for access to the new boatyard facilities, about 400 cy of additional sediment dredging to -10 ft MLLW would be conducted to within about 25 ft of the new sheetpile bulkhead across the alignment of the marine railway where the new travel lift structure would be constructed. This area of additional sediment dredging beyond that required for sediment cleanup is indicated on Figure 5 and Cross Section A-A' on Figure 6. The original USACE permitted dredge depth was -12 ft MLLW with a 1 ft allowable overdredge, so the proposed dredging effort represents maintenance dredging to restore previous permitted and constructed vessel drafts.

Sediment dredging would be conducted using barge-mounted mechanical clamshell dredge equipment, with the dredged material placed on an adjacent barge and dewatered prior to offloading. Straw bales or geotextile filter material would be placed at the weep holes in the sides of the barge if needed to limit loss of material and control turbidity. Land-based excavation equipment would be used to excavate sediment and remove debris within the marine railway well, with such equipment removing intertidal sediment near the bulkhead line "in the dry" during

low tide and potentially placing excavated material directly into shore-based containers or trucks.

Dredged sediment would be transported to an upland facility licensed to accept solid waste. The specific disposal location would be selected by the contractor during project bidding. The most probable sediment disposal facilities are the Columbia Ridge Landfill in Arlington, Oregon; the Roosevelt Regional Landfill in Roosevelt, Washington; and, the Richmond Landfill in Richmond, British Columbia, Canada.

Galvanized Steel Sheetpile Bulkhead Installation: The new sheetpile bulkhead would be driven a few feet (typically 3 ft) in front of the existing timber lagging to provide sufficient clearance to facilitate installation and accommodate the variable alignment and occasional outward tilting of the existing timber bulkhead. The galvanized steel sheetpile sections would be driven to design depth with an impact or vibratory hammer mounted on a land- or barge-based crane, depending on site constraints and the contractor's preference. The new bulkhead would be anchored by tieback rods connected to anchors installed along the upland portion of the site. The existing timber bulkhead would remain in place behind the new bulkhead structure. Space between the existing and new bulkhead would be backfilled with imported fill material to match existing upland site grades. The filling of this narrow band of existing intertidal habitat along the existing bulkhead (about 900 ft²), combined with the filling of the existing marine railway well area (about 2,700 ft²), results in the filling/loss of about 0.08 acres of intertidal habitat in this area of the site. This habitat loss would be mitigated by construction of new marine habitat along the Squalicum Outer Harbor breakwater. The construction of the new galvanized steel bulkhead would remove 110 creosote-treated piles and about 3,600 ft^2 of creosote-treated timber lagging from the marine environment through encapsulation behind the new bulkhead.

Demolition of Marine Railway and Construction of Finger Piers: In conjunction with sediment dredging activities, the existing marine railway would be demolished and disposed at an appropriate offsite location to allow replacement with two approximately 125-ft (from the new bulkhead) finger piers along the railway alignment to accommodate the new travel lift. The various components of the marine railway would be cut or dismantled using both barge-mounted and land-based mechanical equipment and brought to an upland area of the site for size reduction and salvaging and/or disposal. The creosote-treated timber piles associated with the railway (approximately 95 piles outside the railway well, with about 10 mooring piles located north of the railway) would be pulled or cut off and capped with clean sediment below the final dredge mudline elevation. Unless suitable for salvaging and reuse by the contractor for upland use, the piles and timbers would be cut to appropriate lengths and disposed of at an appropriate upland landfill facility. The steel components of the marine railway platform and the steel rails would be salvaged or recycled. As previously discussed, land-based excavation equipment would be used to remove sediment and debris within the marine railway well. Any timber piles and structural components within or near the railway well area that might interfere with installation of the new steel sheetpile bulkhead/tieback system, or the new travel lift pier structure would be cut off or removed. The marine railway well area behind the new sheetpile bulkhead would then be backfilled with imported backfill material up to about 14 ft MLLW to match existing upland site grades.

The new finger piers for the 150-ton travel lift would be installed following completion of sediment dredging activities. As shown on Figures 10 and 12, each concrete finger pier would be 6 ft wide and approximately 145 ft long, with an average 125-ft length extending out beyond the alignment of the new bulkhead, which extends out into the water approximately 3 ft further than the former timber-pile bulkhead. Each finger pier would have a 2.5-ft wide steel or aluminum open-grated walkway and a handrail attached to the outer edge of each pier. The two finger piers would be supported by 36 two-ft diameter, open-ended, galvanized or coated steel pipe piles driven to an appropriate embedment depth below the final mudline with an impact hammer and leads mounted on a barge-based crane. The top elevation of the finger piers would be about 14 ft MLLW to match existing site grades.

Backfilling: Selected areas of the site would be backfilled with clean imported granular fill material. The fill material would typically be a sand and gravel mixture with a relatively low percentage of fines (less than about 4 to 5 percent material passing the U.S. No. 200 sieve) to limit turbidity and facilitate placement. The areas to be backfilled include:

- Areas that are dredged to remove contaminated sediment to depths below a neat line elevation of -13 ft MLLW that would be backfilled up to -13 ft MLLW. (Note: this would not include areas that have a design dredge elevation of -13 ft MLLW and are dredged to a slightly lower elevation). The post sediment dredging and backfilling contours are shown on Figure 9. These areas would likely be backfilled with about 1,600 cy of imported granular fill material delivered to the site by barge and placed with a clamshell bucket. Because of the low percentage of fines, the imported backfill material is predicted to settle freely through the water column and spread evenly onto the sediment surface to be backfilled.

- The marine railway well area behind the new sheetpile bulkhead that would backfilled up to about 14 ft MLLW and paved to match existing upland site grades. This area would likely be backfilled with about 1,200 cy of imported granular fill material delivered to the site by truck, and placed and compacted with conventional earthwork equipment to meet the project requirements for structural backfill to support wheel loads associated with the new 150-ton travel lift hoist. (It is possible that the lower portions of the excavation would be backfilled with quarry spalls to facilitate compaction of the overlying structural fill material.)

- The nominal 3-ft-wide space between the existing timber bulkhead and the new sheetpile bulkhead that would backfilled up to about 14 ft MLLW to provide a barrier between the creosote-treated timber piles and lagging. This area would be backfilled with about 400 cy of a free-flowing granular fill material (such as pea gravel) to match existing upland site grades (Figure 11). Fill material would be delivered to the site by truck and placed with conventional earthwork equipment.

Additional Piling/Bulkhead Repairs and Replacement: Lagging repair under the wharf along Segment C will be conducted to prevent further sloughing of upland soil from beneath bulkhead lagging that is damaged for marine borers. The repairs would consist of installing vertical metal channels along existing piles and attaching ammoniacal copper zinc arsenate (ACZA)-treated wood lagging between the channels, water-ward of the failing lagging (Figures 13a and b). The space between the old and new lagging will be backfilled with a clean granular material to further isolate the old creosote-treated lagging from the marine environment. The filling of this narrow band of existing intertidal habitat along the existing bulkhead (about 120 ft^2) results in the filling/loss of about 0.003 acres of intertidal habitat in this area of the site.

The existing timber bulkhead along Segment C also contains two timber piles (Nos. 79 and 85) with less than 90 percent remaining cross sectional area that would be repaired. Repairs would be effected by removing the wharf decking near each damaged pile, using land-based pile driving equipment to install galvanized steel H-piles on both sides of each damaged pile, and installing a galvanized channel to secure these H-piles to the existing tieback rod.

Timber piles at the site with less than 90 percent remaining cross sectional area would be repaired/replaced as appropriate. The locations of the deteriorated timber piles are indicated on Figure 10 (as well as on other plan views), and include:

- 2 piles along the bulkhead in Segment C (to be repaired)
- 6 piles under the wharf in Segment C (to be repaired/replaced)
- All 16 fender piles along the south side of the wharf in Segment C (to be replaced)
- 5 of the 15 piles supporting the north travel lift float (to be replaced)
- 3 piles along the bulkhead in Segment C (to be isolated behind the new bulkhead).

Certain timber piles no longer in use would be pulled/vibrated out of the sediment, if practicable, or cut off slightly below the final mudline elevation. These include about 140 piles associated with the marine railway (i.e., piles supporting the railway and piles within the marine railway well) and about 20 derelict pile stubs located adjacent to the Segment C bulkhead. Additionally, all of the piles supporting the north travel lift float would need to be removed and replaced to allow temporary relocation of the float during sediment dredging activities. Creosote-treated piles removed from the marine environment may be temporarily stockpiled on the upland portion of the site, with runoff from the stockpile area to be collected and treated by the boatyard stormwater treatment system.

Existing deteriorated timber pier piles would be repaired, removed and/or replaced by one or a combination of the following methods. Piles may be cut at or slightly below the mudline and a new pile secured directly on top, fully extracted with or without replacement, or removed by cutting off the pile below the mudline. Replacement timber piles and pile sections would be treated with ACZA, a wood preservative.

Piles deemed to be repairable may be repaired using a fiberglass or steel casing that is subsequently filled with concrete; such casings would extend from approximately 2 ft below the mudline up to the bottom of the pile caps.

Replacement piles would be ACZA-treated timber piles (or steel piles if appropriate). Replacement piles would be driven to design depth using barge- or land-based pile driving equipment, as determined to be most appropriate by the contractor. The choice of pile materials would depend on available funds and the intended application.

Wharf rehabilitation would include repair/replacement of selected timber pile caps, stringers, decking, and bullrailing. New timber cross bracing would also be added to the wharf as needed. Most of these activities would occur above the mean higher high water elevation.

Proposed Habitat Restoration/Mitigation: The project would incorporate compensatory habitat creation along a portion of the existing riprap breakwater on the west (seaward) side of Squalicum Outer Harbor (Figures 2, 15, and 16). Habitat would consist of a shallow subtidal bench between -4 ft and -6 ft MLLW. The slope of the habitat bench surface would not exceed about 10H:1V, and in most areas would be flatter than about 20H:1V. An outer slope of about 5H:1V would descend to an existing mudline elevation of approximately -12 ft MLLW. The goal of the marine habitat design is to create about 2 acres of intertidal and shallow subtidal habitat above -10 ft MLLW, including at least 1 acre of habitat between -4 and -6 ft MLLW. This new habitat would result in compensation for the approximate 0.5 acres of habitat affected by project impacts, plus additional habitat to concurrently fulfill enhancement and restoration objectives and ensure maintenance of compensatory habitat over time.

Habitat would be constructed using about 30,000 to 35,000 cy of Squalicum Waterway dredged material designated for beneficial reuse and made available through a separate USACE maintenance dredging project scheduled for the fall of 2003 (Contact: Hiram Arden, USACE, Seattle District; Phone 206-764-3401).

Habitat construction material would be placed in a series of relatively thin lifts, with a designated waiting period between placement of successive lifts to allow the material to consolidate and gain strength. Habitat material would likely be transferred to the outer breakwater area using bottom-dump barges, which would be used to place the majority of the habitat material up to approximately -4 ft MLLW. Above that elevation, or when tides drop to depths too shallow to operate a bottom-dump barge, the habitat material may need to be placed with mechanical clamshell equipment operating from a barge.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

Up to about 7,600 cy of sediment (primarily sand, silt, and clay) would be removed from the marine environment and disposed of at a licensed upland solid waste facility to achieve MTCA sediment cleanup goals. Chemicals of concern and their concentrations and distribution have been evaluated in a series of investigations under MTCA. The dredge volume includes an allowance for up to 1 ft of overdredge below the design dredge depth. Contaminated sediment removal areas would include the impacted area west of the new sheet pile bulkhead and the entire marine railway well area east of the new sheet pile bulkhead (Figure 4). The vertical extent of contamination is limited to the upper 4 ft of sediment. The proposed sediment dredging depths (Figure 5) and cross sections (Figures 6 and 7) were developed to remove the upper 4 ft of sediment within the identified zone of contamination, to the extent practicable, given existing site constraints.

To achieve minimum vessel draft requirements for access to the new boatyard facilities, an additional 400 cy of sediment dredging to -10 ft MLLW would be conducted to within about 25 ft of the new sheetpile bulkhead across the alignment of the marine railway where the new travel lift structure would be constructed. This area of additional sediment dredging is indicated on Figure 5 and Cross Section A-A' on Figure 6.

Selected areas of the site would be backfilled with clean imported granular fill material (about 3,300 cy would be placed over 0.38 acre at the project site). The fill material would typically be a sand and gravel mixture with a relatively low percentage of fines (less than about 4 to 5 percent material passing the U.S. No. 200 sieve) to limit turbidity and facilitate placement. Imported granular fill material would be placed in:

- Areas that are dredged to remove contaminated sediment to depths below a neat line elevation of -13 ft MLLW that would be backfilled up to -13 ft MLLW. The post-sediment dredging and backfilling contours are shown on Figure 9. These areas would receive about 1,600 cy of fill.

- The marine railway well area behind the new sheetpile bulkhead that would backfilled up to about 14 ft MLLW and paved to match existing upland site grades. This area would receive about 1,200 cy of fill. Lower portions of the excavation may be backfilled with quarry spalls to facilitate compaction of the overlying structural fill material.

- The nominal 3-ft-wide space between the existing timber bulkhead and the new sheetpile bulkhead that would backfilled up to about 14 ft MLLW to provide a barrier between the creosote-treated timber piles and lagging. This area would receive about 400 cy of fill (e.g., pea gravel) to match existing upland site grades (Figure 11).

- The nominal 4 inch-wide space between the existing Segment C timber bulkhead and the new timber lagging used for repair would backfilled up to about 14 ft MLLW. This area would receive up to about 80 cy of fill (e.g., pea gravel), as shown on Figure 13b.

New marine habitat would be constructed over approximately 3 acres, using about 30,000 to 35,000 cy of Squalicum Waterway dredged material designated for beneficial reuse and made available through a separate USACE maintenance dredging project scheduled for the fall of 2003. The Puget Sound Dredge Material Management Office (DMMO) has determined that all of the Squalicum Waterway maintenance dredge materials are suitable for unconfined, open-water disposal or beneficial reuse. Only sediment from Squalicum Channel dredge material management units (DMMUs) that comply with NMFS sediment quality no-effects goals for TBT, PAH, and PCB would be used for habitat site fill. Based on available data from the Squalicum Channel Puget Sound Dredge Disposal Analysis (PSDDA) sediment characterization report, DMMUs C3 and C5 through C11 are most appropriate for use as habitat backfill. It is expected that most of the available dredge material would be fine-grained silt to clayey silt material with greater than about 90 percent material passing the U.S. No. 200 sieve.

4) Would the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No surface water withdrawals or diversions are part of this project.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

The proposal does not lie within a 100-year floodplain.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

The proposal does not involve any direct discharges of waste materials to surface waters. Mitigation measures would be employed during construction to reduce or eliminate suspended soil, fill material, or dredged material generated during construction activities in the water, or the leaching of treatment chemicals from pilings to the

water column. These mitigation measures (which are also effective for the protection of biological resources) are described in Section B.5.d.

b. Ground:

1) Would ground water be withdrawn, or would water be discharged to ground water? Give general description, purpose, and approximate quantities if known.

No ground water would be withdrawn, nor would water be discharged to ground water as part of this proposal.

2) Describe waste material that would be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste material would be discharged into the ground from septic tanks or other sources.

c. Water runoff (including stormwater):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where would this water flow? Would this water flow into other waters? If so, describe.

Runoff from adjacent upland areas is not part of this proposal and would not be affected by this proposal. Storm water runoff generated in upland areas within the boat yard is collected, treated to meet Ecology stormwater discharge standards, and discharged through a grassy swale into Bellingham Bay. Existing stormwater discharges would not be affected by this proposal. Runoff from boat pressure wash activities is collected, treated and reused in a closed loop system that does not result in any discharge from the site.

2) Could waste materials enter ground or surface waters? If so, generally describe.

No waste materials would enter ground or surface waters as a result of proposal construction or operation.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

This proposed project has significant mitigation incorporated into it to reduce the impacts of existing contamination on water resources. Key project components would, by their very nature, improve local surface water quality. The removal of contaminated dredged sediments and pilings, and replacement with clean backfill and inert bulkhead materials all serve to reduce impacts from chemical hazards to the surface water column. No adverse impacts are anticipated to ground or runoff water during construction or operation of this proposal. Minor short-term impacts to surface water may occur during construction, but mitigation measures proposed in Section B.5.d to protect biological resources (controls at barge, dredge equipment selection, piling material selection, monitoring for turbidity, silt fencing, etc.) would substantially reduce such impacts.

4. Plants

a. Check or circle types of vegetation found on the site:

——— **deciduous tree:** alder, maple, aspen, other

——— **evergreen tree:** fir, cedar, pine, other

——— **shrubs**

——— **grass**

——— **pasture**

——— **crop or grain**

——— **wet soil plants:** cattail, buttercup, bullrush, skunk cabbage, other

——— **water plants:** water lily, eelgrass, milfoil, other

X ——— **other types of vegetation:** Marine macroalgae (*Laminaria* spp.)

b. What kind and amount of vegetation would be removed or altered?

Based on observations during a pre-construction survey, small quantities of unattached marine algae (e.g., *Laminaria* spp.) have drifted into the project site. Attached macroalgae are unlikely to be present because of a lack of suitable (i.e., cobble and rock) substrate and inadequate light penetration at subtidal depths.

c. List threatened or endangered species known to be on or near the site.

No threatened or endangered plant species are known to be present, based on threatened and endangered species lists obtained from USFWS and the WDFW Priority Habitats and Species database.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Because little or no vegetation is found on the site, no preservation measures are proposed. The new marine habitat site was designed to encourage colonization by eelgrass, which is common in Bellingham Bay and in the shoreline drift and beach wrack along the breakwater.

5. Animals

a. Circle any birds and animals that have been observed on or near the site or are known to be on or near the site:

birds: heron, eagle, songbirds, Western gull, herring gull, European starling
mammals: none
fish: salmon, trout, herring, shellfish

b. List any threatened or endangered species known to be on or near the site.

Based on federal (NMFS and USFWS) and state (WDFW Priority Habitats and Species) information obtained in August and October 2002, threatened and endangered animal species and their habitats may be present in the general Bellingham Bay project vicinity. Species (and habitat) that may be present in greater Bellingham Bay include: Puget Sound chinook salmon, bull trout, bald eagle, marbled murrelet, Steller sea lion, humpback whale, and leatherback sea turtle. Of these species, only bald eagle, chinook salmon, and bull trout are likely to be observed on or near the site.

c. Is the site part of a migration route? If so, explain.

Because chinook salmon and bull trout migrate as juveniles along intertidal estuarine shorelines, the project site and new habitat restoration area may be considered migratory corridors. However, few, if any, juvenile salmonids are expected to be present in the project areas during construction because in-water activities would be scheduled outside the period of juvenile salmon migration, as defined by NMFS, USFWS, and WDFW (September 1 to February 15) to limit potential disturbance to juvenile salmonids feeding in the area. Adult salmonids are not likely to be in the area because they tend to forage offshore in deeper water.

d. Proposed measures to preserve or enhance wildlife, if any:

Project construction would occur primarily during daylight hours within the period established by NMFS (September 1 to February 15) to limit disturbance to juvenile salmonids feeding in the area.

The project would incorporate habitat restoration along a portion of the existing riprap breakwater on the west (seaward) side of Squalicum Outer Harbor (Figures 2, 13, and 14). Habitat would consist of a shallow subtidal bench between -4 ft and -6 ft MLLW, with a 5H:1V outer slope descending to an existing mudline elevation of approximately -12 ft MLLW. The goal of the marine habitat design is to create about 2 acres of intertidal and shallow subtidal habitat above -10 ft MLLW, including about 1 acre of habitat between -4 and -6 ft MLLW. This new habitat would compensate for about 0.5 acres of project-impacted habitat, plus create additional habitat to concurrently fulfill enhancement and restoration objectives and ensure maintenance of compensatory habitat over time.

Removal and isolation of contaminated sediment and creosote-treated wood from the boatyard is anticipated to have significant, long-term beneficial effects on fish, bird, marine mammal, and aquatic invertebrate habitat and associated prey species. Improvement to site sediment quality from contaminant removal would provide 33,300 ft² of clean marine substrate that would benefit benthic, epibenthic, and pelagic animals, including juvenile salmon and their prey species, and improve water quality. Sediment Quality Standards were designed to protect the most sensitive marine organisms (i.e., sediment-dwelling invertebrates) at the most sensitive life stages (i.e., egg, larval, and settlement stages); post-cleanup sediment quality would be well within the range of values demonstrated to have no adverse effects on these organisms. Pelagic vertebrates, such as salmon, that spend only a small fraction of their life in the nearshore estuarine environment, would benefit from exposure to clean intertidal and shallow subtidal sediment and associated prey resources throughout the approximately 0.76-acre restored area.

Existing adverse effects on sediment and water quality from the creosote timbers comprising the bulkhead, mooring and pier piles, and the marine railway would be eliminated. As a result of bulkhead replacement, about 110 creosote-treated piles and about 3,600 ft² of creosote-treated lagging would have been removed from direct contact with the marine environment. Replacement of the marine railway with a 150-ton travel lift would further remove 5,300 ft² of creosote timbers and 105 creosote piles from the marine environment. Marine railway removal and creosote bulkhead isolation are especially important parts of this remediation project because these structures comprise a significant part of intertidal habitat available to juvenile salmonids and other aquatic resources within the project site. This project is also strongly supported by the Whatcom County Marine Creosote Piling Remediation Program being administered by the City of Bellingham, through a grant from the Washington State Department of Ecology, because of the significant reduction of creosote in the marine environment that will be achieved from proposed timber removal and isolation.

The proposed project would also have significant, beneficial, long-term effects on juvenile and adult chinook and chinook habitat from the creation of 2 acres of high-quality, fine-grained marine habitat within the action area. In addition to the creation of high-quality habitat for many estuarine-dependent fish, the new habitat site would enhance the existing, low-quality coarse-grained habitat along the breakwater by covering a portion of the riprap with silty sand substrate beneficial for benthic and epibenthic colonization.

Long-term, beneficial changes in shading would occur upon replacement of the marine railway with a travel lift. The existing marine railway extends over and through the water column from about 15 ft MLLW to below -10 ft MLLW. The marine railway shades about 2,500 ft², including about 50 ft² of intertidal habitat between -2 and -4 ft MLLW and about 2,100 ft² of subtidal habitat between -4 and -11 ft MLLW. The marine railway would be removed and replaced by a travel lift. The travel lift would be mounted on two narrow piers above 15 ft MLLW, with far fewer steel pile supports that would shade less than 2,150 ft² (0.05 ac) of habitat, which is about 330 ft² (<0.01 acre) less shaded area than the former marine railway. The travel lift's distance from the water, narrow piers, open metal grating, and greatly reduced pile supports would cover less habitat and shade less densely over a smaller total area than the marine railway. Thus, light penetration would be greatly improved in intertidal and shallow subtidal areas of the project site, resulting in greater potential algal productivity.

The new marine habitat would provide greatly improved passage conditions for juvenile salmonids along a potential migratory corridor. The new marine habitat site would provide a large (1- to 2-acre) area of habitat that would provide shallow-water refuge from large aquatic predators. If eelgrass and marine algae colonize the new habitat as anticipated, additional refuge from aquatic and avian predators would be available along the corridor. The new marine habitat site would convert about 2.5 acre of deep subtidal habitat into about 2-acre shallow subtidal habitat between -10 and -4 ft MLLW. The marine habitat would provide long-term, high quality substrate for production of epibenthic and benthic prey organisms for fish, including juvenile salmonids, away from boatyard activities.

Conservation measures to further avoid, minimize, or mitigate detrimental environmental impacts from project activities on aquatic resources include the following:

- Straw bales or geotextile filter material would be placed at the weep holes in the sides of the barge if needed to limit loss of material and control turbidity.

- To further limit turbidity, mechanical (e.g., open clamshell) equipment would be used to excavate contaminated sediment. Additionally, land-based excavation equipment would be used to excavate sediment and remove debris within the marine railway well, with such equipment removing intertidal sediment near the bulkhead line "in the dry" during low tide and potentially placing excavated material directly into shore-based containers or trucks.

- Based on DREDGE modeling, no short-term water quality impacts are anticipated at the point of dredging for any of the dredging activities. But, if water quality monitoring parameters are exceeded during sediment dredging, backfilling, or habitat bench construction activities, appropriate corrective actions will be taken. Monitoring frequency may be temporarily increased until data indicate that releases are being adequately controlled. Corrective actions could include modification of sediment dredging or handling procedures, modification of backfilling procedures, implementation or modification of engineering controls (such as a silt curtain), suspension of the activity causing the exceedance until water quality criteria are achieved, or allowance of a short-term water quality exceedance (e.g., if the exceedance is minor and the result of turbidity from clean backfill).

- As part of the compliance monitoring program, water quality monitoring would be conducted during the dredging operations to verify that water quality is maintained within standards, and to trigger contingency actions, as appropriate. Confirmation samples would be collected and analyzed for the constituents of concern to verify that sediment cleanup activities achieve project objectives. Additionally, the contractor would be required to conduct a post-dredging bathymetric survey to confirm that minimum design dredge depths have been achieved.

- To control the potential release of contaminated sediment during transfer to a disposal site, options currently include:

    (a) Offloading the material from the barge at a designated upland location along the north side or near the northeast corner of the site, and transfer to lined rail cars for transport to a licensed upland landfill disposal facility. The offloading area would be lined to facilitate containment and collection of any material spillage during the material transfer operations.

    (b) Transporting the material by barge to an upland landfill that has facilities for offloading the barge and transferring the material to the upland disposal facility.

- To limit the potential flow of muddy runoff into the bay, stockpile areas for backfill material would be located on grass or gravel upland areas, with silt fencing installed around the material.

- To reduce the short-term risk of high-pH exposure to fish from wet concrete, any wet concrete used for pile repairs would be contained within a form or sleeve (made of either steel or fiberglass) with a

geotextile fabric secured over the sleeve to contain any spillage, to prevent direct contact with seawater and limit leaching. Forms and impervious material would remain in place until the concrete is cured.

- To minimize exposure of aquatic organisms to PAHs in creosote, PAH-contaminated sediment would be removed and areas dredged below -13 ft MLLW would be backfilled with clean fill material. The removal of more than 215 creosote-treated piles and isolation of PAH-contaminated timbers would reduce or eliminate long-term PAH-exposure to aquatic organisms.

- ACZA-treated piles would replace creosote-treated piles wherever wood supports are necessary. New ACZA-treated piles would be dried by the manufacturer before transporting them to the site for pile replacement. ACZA-treated piles stockpiled on site would be placed within the boatyard's stormwater interception and treatment area, so any runoff from the piles before installation would be captured and treated before entering marine waters.

- Steel piles and framing members and pre-cast concrete decking panels would be used in place of treated wood for the new marine travel lift.

6. Energy and natural resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) would be used to meet the completed project's energy needs? Describe whether it would be used for heating, manufacturing, etc.

Project construction activities would require the expenditure of electricity, diesel fuel, and gasoline in support of both construction and operation during the life of the project. Electricity would be required to run power tools and equipment, and proposal area lighting. Diesel fuel would be required to operate dredging, piledriving, and other construction equipment, diesel-powered construction and operation support vehicles, and the travel lift. Gasoline would be required to operate worker vehicles and small motors during both construction and operation. Natural gas or electricity would be required for heating during on-water project operations. The amount of energy expended by this proposal would be very minor and easily accommodated by existing energy resources in the area.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

The project would not affect the potential or actual use of solar energy by adjacent properties.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

The proposal would include energy conservation features normally incorporated in construction equipment and shipyard operational equipment associated with the travel lift and other improvements. No other energy conservation measures are warranted or proposed.

7. Environmental health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

The project would require the operation of combustion engines during construction in association with crane and piledriving operations, as well as worker commuting activities. During operation, a replacement travel lift would be in service, and worker and client vehicles would operated in the area. These activities would result in the release of minor and allowable amounts of related emissions into the air. The operation of combustion engines in association with crane and piledriving operations during construction and the travel lift during operation could

potentially cause direct or indirect releases (or spills) to the surface waters of the project area. Contaminated sediments will be disturbed during dredging, and to a lesser degree during the removal of deteriorated piles. This may result in releases of chemicals into the water column as described above under the description of the project's potential impacts to water. All work would be performed in accordance with a project health and safety plan to protect worker safety during construction.

1) Describe any emergency services that might be required.

The proposal would not require emergency services beyond the fire, rescue, and emergency response services readily available to serve the Bellingham port-industrial area, which are fully adequate to support the proposal.

2) Proposed measures to reduce or control environmental health hazards, if any:

The potential for environmental health hazards to occur as a result of construction or operation of the proposed improvements would be minor. Therefore, no proposed measures would be required nor warranted, other than spill prevention plans, stormwater pollution prevention plans, employee right-to-know measures, and waste management provisions that might be required by Ecology, and other relevant state health and safety compliance requirements with the potential to reduce such hazards. Additionally, standard safety precautions associated with heavy equipment operations, including precautions directed at reducing and controlling air emissions and releases of fuels and other contaminants, would be adhered to on the project site.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

There are no substantial sources of noise in the area with the potential to affect the proposed project. The project is located in a port-industrial area, where noise levels are relatively high (compared to residential and commercial uses) and consistent with industrial activities, such as ship building and repair, warehousing with substantial truck and rail operations, and other such uses.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Project-related noise would be generated during construction by the project as a result of dredging operations, crane operations during removal of damaged pilings, and piledriving activities during sheetpile bulkhead and piling installation. These impacts would be short-term and typical for sound levels created during the construction of industrial facilities, which typically ranges from 78 to 89 dBA at 50 ft (EPA 1971). Supporting vehicle operations would also generate minor project-related noise during construction, but these impacts would be negligible.

Construction-generated noise is exempt between the hours of 7:00 a.m. and 10:00 p.m. at residential property receivers and during all hours at commercial and industrial receivers. Construction activities associated with the proposed project (except for possible excavation of the marine railway well) are not planned after 10:00 p.m. or before 7:00 a.m. If they occur, however, noise levels measured at the property boundary would be lower than the dBA standards established in the WAC for the nearby industrial properties and substantially below the dBA standard at the nearest residential use.

During operation, the proposal would generate noise from a variety of sources, including travel lift operations (which would similar to current operations, except the travel lift would be larger and would generate slightly higher noise levels), some in-water boat repair activities, and support vehicle operations. This noise would be generally consistent with existing noise levels at the site as well as background noise associated with industrial areas.

Whereas there may be a slight increase in noise levels due to the larger travel lift and the potential increase in workers/clients using the area as a result of the development of a more efficient shipyard, noise levels at and around the proposed project site would remain within acceptable levels.

3) Proposed measures to reduce or control noise impacts, if any:

Equipment at the proposed site would be equipped with standard noise reduction equipment, such as mufflers. All noise generated by the project (with the exception of piledriving operations) would be similar to that typically generated at the shipyard and within the greater Bellingham port-industrial area. The most significant project noise would be piledriving operations, which would be conducted during daylight hours as allowed by local noise ordinances to reduce noise impacts.

Because noise levels generated by proposal development and operation would be within regulatory limits and would be consistent with surrounding uses and noise environments, no measures to mitigate noise impacts are proposed or warranted.

8. Land and shoreline use

a. What is the current use of the site and adjacent properties?

The area of the site is generally industrial. A commercial boatyard currently occupies the site; adjacent properties include a pier, marina, yacht club, and supporting port-related facilities.

b. Has the site been used for agriculture? If so, describe.

The site has never been used for agriculture.

c. Describe any structures on the site.

A timber bulkhead along the site waterfront supports the upland fill areas of the boatyard. The timber bulkhead is constructed of creosote-treated wood piles that support horizontal wood siding (i.e., lagging) with tieback rods and deadman anchors at most pile locations (Figure 11). About 176 ft of bulkhead along the north side of the site is covered by an existing wharf. The bulkhead alignment has been subdivided into three segments (A, B, and C) for Port planning purposes, as indicated on Figure 3. The bulkhead lengths for Segments A, B, and C are approximately 144 ft, 222 ft, and 258 ft, respectively.

A creosote-treated timber pile-supported marine railway extends from the upland railway well area (approximately 30 ft wide by 100 ft long) into the water about 235 ft beyond the timber bulkhead. A row of creosote-treated timber mooring piles is located just north of the marine railway. The marine railway is constructed on bents alternately supported by two and three timber piles, with timber pile caps and stringers supporting two steel rails. The marine railway platform that travels on the two steel rails is constructed with steel framing and creosote-treated timber decking. The sides of the railway well are supported by creosote-treated timber piles and lagging supplemented with concrete side walls along a portion of the structure.

A 35-ton travel lift is supported by piers on pairs of timber piles with timber cross bracing. Each pier is about 6 ft wide (including the walkway). Timber and steel carrier beams extend about 77 ft beyond the timber bulkhead. A large timber structure extends about 350 ft beyond the timber bulkhead and is secured to the north travel lift pier by 15 timber piles. A smaller timber float is secured to the south travel lift pier.

A wharf along the north side of the site (30 x 176 ft) within Segment C is a creosote-treated timber pile-supported structure with timber decking, stringers, pile caps, and cross bracing. The wharf extends several feet beyond the underlying timber bulkhead. A small building sits on the eastern side of the wharf and extends upland onto a gravel-surfaced area. The wharf west of Segment C is not part of the project area.

Upland areas east of the bulkhead in Segment B contain several small sheds, several buildings, open storage and work areas, parking areas, and a grass bioswale (Figure 3). The north third of the boatyard is a gravel-surfaced storage area; the rest is paved with asphalt concrete. The upland area adjacent to Segment A contains structures and paved parking areas associated with the Squalicum Yacht Club and the Bellingham Yacht Club.

Several active and abandoned stormwater outfall pipes extend through the timber bulkhead on the north and east sides of the site. The origin and use of these outfalls are being investigated as part of the MTCA upland cleanup. The Port has previously performed maintenance activities on the site stormwater system to limit potential contaminant releases to site sediment and surface water resulting from stormwater discharges. In addition, Seaview Boatyard North constructed a closed, self-treating boatyard water treatment system that retains, treats, and recycles water from the pressure wash facility. Seaview Boatyard North also constructed new improvements to treat site stormwater runoff from paved areas outside the pressure wash facility, including a grassy swale that treats stormwater runoff to Ecology standards prior to release into the marine environment.

Squalicum Harbor marina and docks are directly south of the site. A riprap breakwater extends along the seaward side of the boatyard, from the project site south to Squalicum Creek.

d. Would any structures be demolished? If so, what?

Yes, the marine railway and numerous creosote-treated timber piles would be demolished and/or removed. The primary purpose for removal of the marine railway is to allow access to underlying sediment for contaminant removal. In conjunction with sediment dredging activities, the components of the existing marine railway would be demolished and disposed of at an appropriate offsite location to allow construction of the new 150-ton travel lift finger piers along the railway alignment. The location of the existing marine railway is shown on Figures 3 and 4, the alignment of the new travel lift piers is shown on Figure 10, and a generalized section of the new travel lift pier structure is shown on Figure 12.

The various components of the marine railway would be cut or dismantled using both barge-mounted and land-based mechanical equipment and brought to an upland area of the site for size reduction and salvaging/disposal activities. The creosote-treated timber piles located beyond the bulkhead line (approximately 105 piles, including the 10 mooring piles located north of the railway) would be pulled or cut off below the final dredge mudline elevation. The amount of creosote-treated wood that would be removed from the marine environment by dismantling the marine railway is about 5,300 ft². Unless suitable for salvaging and reuse by the contractor, the piles and timbers would be cut to appropriate lengths and disposed of at an appropriate upland landfill facility. The steel components of the marine railway platform and the steel rails would be salvaged or recycled. As previously discussed, land-based excavation equipment would be used to excavate sediment and remove debris within the marine railway well as part of sediment dredging activities. Any timber piles and structural components within or near the railway well area that might interfere with installation of the new steel sheetpile bulkhead/tieback system or the new travel lift pier structure would be cut off or removed. The marine railway well area behind the new sheetpile bulkhead would then be backfilled with imported backfill material up to about 14 ft MLLW to match existing upland site grades.

The proposed site activities would eliminate about 215 of creosote-treated piles from the marine environment (including those supporting the marine railway), replace at least 27 creosote-treated piles with piles that have less impact on sediment and water quality, and eliminate about 8,900 ft² of creosote-treated limber lagging and railway timbers from the marine environment.

e. What is the current zoning classification of the site?

The current zoning classification of the site is Commercial.

f. What is the current comprehensive plan designation of the site?

The current comprehensive plan designation of the site is CBD West, 3.

g. If applicable, what is the current shoreline master program designation of the site?

The City of Bellingham Shoreline Master Program designates Bellingham Bay as “urban maritime.”

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Habitat for federally listed species (Puget Sound chinook salmon and bull trout), in the form of water column and intertidal substrate, is present at the proposed site. Essential Fish Habitat (designated under the Magnuson-Steven Fishery Management Act) for Pacific salmon and Pacific groundfish is also present.

i. Approximately how many people would reside or work in the completed project?

Approximately 35 to 40 employees would work at the completed project. No people would reside at the site of the completed project.

j. Approximately how many people would the completed project displace?

The project would not displace any people.

k. Proposed measures to avoid or reduce displacement impacts, if any:

No displacement impacts would occur as a result of the project; therefore, no measures are warranted with respect to displacement impacts.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The proposal is compatible with existing and projected land uses and plans; therefore, no land use impacts exist and no associated mitigation measures are warranted.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

No housing units would be provided under this project.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

No housing units would be eliminated by this project.

c. Proposed measures to reduce or control housing impacts, if any:

No impacts to housing would occur as a result of this project; therefore, no related mitigation measures are warranted.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal

exterior building material(s) proposed?

The height of any structures proposed as part of the in-water improvements at the site would be the negligible and not higher than the abutting upland fill. The proposal would allow the replacement of the existing travel lift with a larger capacity (and taller) travel lift, but this improvement would not represent a structure, since the travel lift would be mobile.

b. What views in the immediate vicinity would be altered or obstructed?

The proposed improvement would not obstruct any views. Views from residential areas on the bluff to the east would be slightly altered by the addition of the two track ways for the travel lift that would be constructed as part of the project. However, this view alteration would be very minor and consistent with the port-industrial character of the area. Views of the shore from the waterside also would be slightly altered along the westerly facing shoreline of the project, as a sheetpile bulkhead would replace the existing timber bulkhead.

c. Proposed measures to reduce or control aesthetic impacts, if any:

There are no significant aesthetic impacts imposed by this proposal; therefore, no related mitigation measures are proposed.

11. Light and glare

a. What type of light or glare would the proposal produce? What time of day would it mainly occur?

The proposal would entail the replacement of a timber-pile bulkhead with a galvanized steel sheetpile bulkhead. This would increase the potential for glare (from the waterside) associated with the proposed site; however, the impacts of this potential glare would be small. Galvanized steel, while possessing some reflective characteristics, is not highly reflective, appearing somewhat brighter (although not significantly glare producing) than wooden timbers. The site would remain lighted for some nighttime work. However, site lighting would not be appreciably changed under this project.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

Light and glare from the finished project would not be a safety hazard or interview with views.

c. What existing off-site sources of light or glare may affect your proposal?

There are no off-site sources of light or glare that would affect this proposal.

d. Proposed measures to reduce or control light and glare impacts, if any:

The project is not anticipated to generate light and glare impacts that would warrant mitigation; therefore none is proposed.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

The project is located in Squalicum Outer Harbor. Marina moorage facilities for recreational boat are located adjacent to the proposed project site. The immediate nearshore area of the site is used by recreationally important fish species (salmon, shellfish, etc.); however, the immediate area of the proposed project (like most of the Bellingham industrial waterfront) is not used for the harvesting of these resources. The open-water areas of Bellingham Bay and the nearby municipal pier is far more frequently used for recreational fishing than the

industrial waterfront.

b. Would the proposed project displace any existing recreational uses? If so, describe.

The proposed project would not displace any existing recreational uses.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The proposed project would not generate significant impacts on recreational resources or opportunities; therefore, no measures to mitigate such impacts are proposed.

13. Historic and cultural preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

There are no known places or objects listed on or proposed for any preservation registers known to be on or next to the site.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

There are no landmarks or evidence of historical, archeological, scientific, or cultural importance known to be on or next to the site.

c. Proposed measures to reduce or control impacts, if any:

There are no impacts on known or suspected historical, archeological, scientific, or cultural resources; therefore, no measures to reduce or control such impacts are proposed.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The site is accessed via Roeder Avenue to Squalicum Way and then to Harbor Loop Drive. The existing street system and access to the system would not change under the proposed site improvements.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The area is currently served by Bus Route 46 of the Whatcom Transportation Authority. The nearest transit stop is designated as the Squalicum Harbor stop, and is located approximately 1,000 ft north of the site.

c. How many parking spaces would the completed project have? How many would the project eliminate?

The completed project would not add or eliminate any parking spaces.

d. Would the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

The proposal would not require any new roads or streets, or related improvements.

e. Would the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project would use the existing street system described above to provide access to the site via trucks and automobiles. The project would also use the water approaches to the site for boat access to the ship repair and building facilities. The completed site would not require rail or air transport.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

There would be no immediate impact on vehicular trips per day to the site as a result of the proposed site improvements. It is possible that with the improved efficiency of the shipyard, more business would ultimately be attracted to the shipyard, creating a need to hire more shipyard workers. However, this indirect impact would not be sufficiently substantial to cause significant increases in vehicle trips or the need for transportation/transit improvements.

g. Proposed measures to reduce or control transportation impacts, if any:

The proposed project would not cause significant transportation impacts; therefore no mitigation is proposed.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

The project would not result in an increased need for fire protection, police protection, health care, schools, or other public services.

b. Proposed measures to reduce or control direct impacts on public services, if any.

The proposed project would not cause significant public service impacts; therefore no mitigation is proposed.

16. Utilities

a. Underline utilities currently available at the site: <u>electricity, natural gas, water, refuse service, telephone, sanitary sewer,</u> septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

The proposed project improvements would not require additional utilities to be extended to the site. During construction, diesel crane, dredging, and pile driving powered equipment; electrical power tools; cutting torches (with acetylene or other portable power source brought to site); and other portable resources would be used at the site. There would be additional workers using the site and either using water supply and sanitary facilities at the site or portable wash-up and sanitary facilities. In addition, workers would generate more solid waste. However, the impact on these services would be negligible.

During operation, the use of these services would be expected to remain approximately the same as existing use. Even if a more efficient shipyard operation ultimately attracts some additional employment and clients, the surplus capacity of public services in the proposed project area would readily accommodate the added demand caused by this increase in business.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature:

Larry Beard
Authorized Agent

Date Submitted: March 17, 2003